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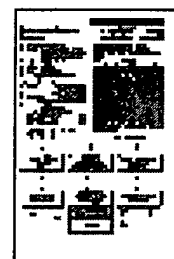
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Title: **JP2001246493A2: SOLDERING MATERIAL, DEVICE OR APPARATUS USING SAME AND ITS PRODUCING METHOD**

Country: **JP Japan**

Kind: **A2 Document Laid open to Public inspection**

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Application Number: **JP2000000395906**

IPC Class: **B23K 35/26; B23K 1/00; B23K 35/28; C22C 5/06; C22C 13/00; H01L 21/52; H01L 21/60; H05K 3/34;**

Priority Number(s): **Dec. 28, 1999 JP1999000373404**

Abstract: **Problem to be solved:** To provide lead-free solder inexpensively and easily usable for high temperature soldering by using a raw material having general applicability and to provide a device joined and formed by using the same.



**Solution:** This soldering material is a tin-zinc-silver series soldering material in which the weight ratio of tin to zinc is (97:3) to (79:21), and the weight ratio of the total of tin and zinc to silver is (88:12) to (50:50), or a tin-zinc-silver series soldering material in which the weight ratio of tin to zinc is (70:30) to (5:95), and the ratio of silver is  $\leq 15$  wt.% of the total content of silver, tin and zinc, or a tin base soldering material composed of 0.01 to 2 wt.% germanium and/or aluminum, and the balance tin, or a soldering material in which the weight ratio of tin to zinc is (80:20) to (70:30), by which the electric connection of the device requiring heat resistant operation is formed. Among plural soldering stages, in the former stage, the production of the device is performed by using the above soldering material.  
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Family: [Show known family members](#)

Other Abstract Info: **CHEMABS 135(04)049626D**

Foreign References: **No patents reference this one**

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